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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,231	01/29/2004	Wolfram Schmid	MB 383	2199

7590 06/09/2005

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EXAMINER

TRIEU, THAI BA

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No.	Applicant(s)	
	10/772,231	SCHMID ET AL.	
	Examiner	Art Unit	
	Thai-Ba Trieu	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>01/09/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character **"20"** has been used to designate both **"control unit 20"** and **"actuator 20"** (See Figure 1). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "different cross-sectional shapes" (See Claim 3); and **"smaller exhaust manifold"** (See Claim 9) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures

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appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

- On Page 8, line 5, "***actuator 20***" should be replaced by – ***actuator 20a*** – (for consistency of the whole specification).

Appropriate correction is required.

Claim Objections

Claims 9-10 are objected to because of the following informalities:

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- In claim 9, line 5, ***“exhaust gas manifold (3a, 3b)”*** should be replaced by – **exhaust gas inlet (3a)** – (for incorporating with the specification and claims).

- In claim 10, line 3, ***“the respective exhaust gas manifold (3a, 3b)”*** should be replaced by – **the respective exhaust gas inlets (3a, 3b)** – (for incorporating with the specification and claims).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 5, 9, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically,

- In claim 5, the recitation of “can rotate” renders the claim indefinite, since it is not clear that under which condition the valve body can rotate between the first and second position and said blocking position; and under which condition the valve body cannot rotate between these positions. Applicants are required to identify each condition of the body valve.

- In claim 9, the recitation of “the smaller exhaust gas manifold” render the claim indefinite, since it is not clear that how much smaller exhaust manifold is to be compared with the other exhaust manifold. Applicants are required to clarify

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how smaller the exhaust manifold is to be, such as 1mm, 1cm, or 1 inch smaller than the other.

- In claim 10, "the recitation of "approximately the same magnitude" renders the claim indefinite, since it is not clear that how approximately of the same magnitude of the mass flow to be released from both exhaust gas pipes (4a, 4b) is? Applicants are required to clarify the approximation of the same magnitude of the mass flows passing through the respective exhaust manifolds.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, and 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daudel et al. (Patent Number 6,216,459 B1), in view of Sumser et al. (Patent Number 5,943,864).

Regarding claims 1-3 and 7-11, Daudel discloses an internal combustion engine (6) having:

an exhaust system with an air intake duct (5) and an exhaust duct (7A, 7B) (See Figure 1),

a turbocharger with exhaust gas turbine (8) disposed said exhaust gas duct (7A, 7B) as be driven by the exhaust gas the internal combustion

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a compressor (1, 19) disposed the air intake duct (5) and connected to said turbine (8) so as to be driven thereby (See Figure 1),

a valve (14) disposed in communication with said exhaust duct (35, 36) with said exhaust duct (7A, 7B) upstream of said exhaust gas turbine (8) (See Figure 1), and

a bypass (15) connected said valve (14) and bypassing said turbine for discharging exhaust gas from exhaust duct (7A, 7B) upstream of said exhaust gas turbine (8) (See Figure 1);

wherein said exhaust gas turbine (8) has two exhaust gas inlet passages (via 9, 10), which are each connected to a different exhaust pipe (7A, 7B) of the exhaust gas duct and each exhaust pipe (7A, 7B) is in communication by connecting line (Not Numbered) respective release opening (Not Numbered) said valve housing for communication selectively with one of the communication openings (Not Numbered) in the open positions of the valve device (14) (See Figure 1, Column 3, lines 5-30);

wherein the two exhaust gas inlet passages (9, 10) have different flow passage cross-sections (See Figure 1, Column 3, lines 9-13);

wherein an exhaust gas recirculation device is provided a recirculation line (16), which branches off from one of the exhaust pipes (7A, 7B) assigned to the smaller exhaust gas inlets (9, 10)

and extends the intake duct (5) for supplying exhaust gas thereto (See Figure 1);

wherein the release openings (Not Numbered) which are respective exhaust gas inlets (9, 10) are dimensioned in such a way that the mass flow to be both exhaust pipes (7A, 7B) is approximately the same magnitude (See Figure 1);

wherein said exhaust turbine (8) variable vane (12) controlling inlet flow cross-section of the turbine (See Figure 2, Column 4, lines 5-11).

However, Daudel fails to disclose the structural details of the control valve.

Sumser teaches that it is conventional in the turbocharged internal combustion engine art, to utilize said valve including a valve housing (22) with a valve body (21) movably disposed in said valve housing (22) and having first and second different exhaust gas flow control openings (19, 20), said valve body being adjustable between first position, in which said first gas flow control opening (19) communication with said exhaust gas duct, a second position in which said second gas flow control opening (20) communication said exhaust duct and a blocking position in which exhaust gas flow through said valve (15) is blocked (See Figure 1, Column 3, lines 36-67, Columns 4-5, lines 1-67, and Column 6, lines 1-5);

said first and second gas flow control openings (19, 20) having different cross-sectional areas and shapes (See Figure 1);

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It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized the structural details of the control valve, as taught by Sumser, to improve the efficiency of Daudel device.

Regarding claim 20, the method as claimed would be inherent during the normal use and operation of the modified Daudel device as disclosed in claim 1 above.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daudel et al. (Patent Number 6,216,459 B1), in view of Sumser et al. (Patent Number 5,943,864), and further in view of Erdmann et al. (Patent Number 6,223,534 B1).

The modified Daudel discloses the invention as recited above; however, fails to disclose said control valve having a hollow cylindrical valve body.

Erdmann teaches that it is conventional in the turbocharged internal combustion engine art, to utilize said valve (8) having a hollow cylindrical body (19) so as to define an open interior first and second control openings the wall of said hollow valve body (19) being communication with the interior space (7) of said hollow valve body; and said valve being a rotary slide valve and the valve body being mounted such that it can rotate between said first and second open positions and said blocking position; wherein said blocking position is formed by a wall section said valve body (19) blocking the communication with said exhaust duct, said wall section disposed in the valve body (19) between said first second

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openings (7a, 7b) (See Figures 4-7, Column 4, lines 17-31 and 65-67, Column 5, lines 1-60).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized said control valve having a hollow cylindrical valve body to improve the control of the exhaust gas and the efficiency of the modified Daudel device.

Conclusion

The IDS (PTO-1449) filed on January 29, 2004 has been considered. An initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Finger et al. (Pub. Number WO 2004/053310 A1) disclose a turbocharged internal combustion engine.
- Sumser (Pub. Number 2005/001257 A1) disclose a turbocharged internal combustion engine.
- Hoffland (Patent Number 3,721,265) discloses a three-way valve.
- Zepic et al. (Patent Number 5,771,928) disclose a rotary slide valve for selective application of pressurized air or vacuum to an apparatus.
- Spies et al. (Patent Number discloses a regulating valve.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is


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(571) 272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
June 06, 2005



Thai-Ba Trieu
Primary Examiner
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